

# **2015 First International Conference on Arabic Computational Linguistics (ACLing 2015)**

**Cairo, Egypt  
17-20 April 2015**



**IEEE Catalog Number: CFP15D83-POD  
ISBN: 978-1-4673-9156-6**

**Copyright © 2015 by the Institute of Electrical and Electronic Engineers, Inc  
All Rights Reserved**

*Copyright and Reprint Permissions:* Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

***\*\*\*This publication is a representation of what appears in the IEEE Digital Libraries. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP15D83-POD
ISBN (Print-On-Demand):	978-1-4673-9156-6
ISBN (Online):	978-1-4673-9155-9

**Additional Copies of This Publication Are Available From:**

Curran Associates, Inc  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: (845) 758-0400  
Fax: (845) 758-2633  
E-mail: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

# 2015 First International Conference on Arabic Computational Linguistics

## ACLing 2015

### Table of Contents

Preface.....	viii
Conference Organization.....	ix

---

#### Arabic Lexical Resources

Tunisian Arabic <i>æb</i> Wordnet: Current State and Future Extensions .....	3
<i>Nadia Karmani Ben Moussa, Hsan Soussou, and Adel Mohamed Alimi</i>	
Unsupervised Data Driven Taxonomy Learning .....	9
<i>Mahmoud M. Hosny, Samhaa R. El-Beltagy, and Mahmoud E. Allam</i>	
Enrichment of the Arabic Treebank ATB with Syntactic Properties .....	15
<i>Raja Bensalem Bahloul, Kais Haddar, and Philippe Blache</i>	
Building a Corpus for Arabic Dialects Using Games with a Purpose .....	21
<i>Maya Osman, Caroline Sabty, Nada Sharaf, and Slim Abdennadher</i>	

#### Arabic Language Processing

Arabic Natural Language Processing from Software Engineering to Complex Pipeline .....	29
<i>Younes Jaafar and Karim Bouzoubaa</i>	
Toward the Resolution of Arabic Lexical Ambiguities with Transduction on Text Automaton .....	37
<i>Nadia Ghezaiel and Kais Haddar</i>	
A Proposed Approach for Arabic Language Segmentation .....	43
<i>Adnan Soury, Mohammed Al Achhab, and Badr Eddine El Mouhajir</i>	

## Named Entity Recognition

A Named Entities Recognition System for Modern Standard Arabic using Rule-Based Approach .....	51
<i>Hala Elsayed and Tarek Elghazaly</i>	
Combined Classification for Extracting Named Entities from Arabic Texts .....	55
<i>Fériel Ben Fraj Trabelsi, Chiraz Ben Othmane Zribi, and Wiem Kouki</i>	
Transducers Cascades for an Automatic Recognition of Arabic Named Entities in Order to Establish Links to Free Resources .....	61
<i>Fatma Ben Mesmia, Nathalie Friburger, Kais Haddar, and Denis Maurel</i>	

## Sentiment Analysis, Opinion Mining, and Social Network Analysis

A System for Extracting Sentiment from Large-Scale Arabic Social Data .....	71
<i>Hao Wang, Ayman Hanafy, Mohamed Bahgat, Sara Noeman, Ossama S. Emam, and Vijay R. Bommireddipalli</i>	
A Hybrid Approach for Sentiment Classification of Egyptian Dialect Tweets .....	78
<i>Amira Shoukry and Ahmed Rafea</i>	
Which Configuration Works Best? An Experimental Study on Supervised Arabic Twitter Sentiment Analysis .....	86
<i>Talaat Khalil, Amal Halaby, Muhammad Hammad, and Samhaa R. El-Beltagy</i>	
Automatic Expandable Large-Scale Sentiment Lexicon of Modern Standard Arabic and Colloquial .....	94
<i>Hossam S. Ibrahim, Sherif M. Abdou, and Mervat Gheith</i>	
Lexicon Based and Multi-Criteria Decision Making (MCDM) Approach for Detecting Emotions from Arabic Microblog Text .....	100
<i>Ahmad M. Abd Al-Aziz, Mervat Gheith, and Ahmed Sharf Eldin</i>	
Increasing the Accuracy of Opinion Mining in Arabic .....	106
<i>Sasi Atia and Khaled Shaalan</i>	
Towards Analyzing Saudi Tweets .....	114
<i>Nora Al-Twairesh, Hend Al-Khalifa, and AbdulMalik Al-Salman</i>	
Identifying the Topic-Specific Influential Users Using SLM .....	118
<i>May Shalaby and Ahmed Rafea</i>	

## Applications

Semantic Based Query Expansion for Arabic Question Answering Systems .....	127
<i>Hani Al-Chalabi, Santosh Ray, and Khaled Shaalan</i>	
New Approaches for Extracting Arabic Keyphrases .....	133
<i>Mahmoud Nabil, Amir F. Atiya, and Mohamed Aly</i>	

Processing Judeo-Arabic Texts .....	138
<i>Kfir Bar, Nachum Dershowitz, Lior Wolf, Yackov Lubarsky, and Yaacov Choueka</i>	
Islamic Fatwa Request Routing via Hierarchical Multi-label Arabic Text Categorization .....	145
<i>Reda Ahmed Zayed, Mohamed Farouk Abdel Hady, and Hesham Hefny</i>	
<b>Author Index</b> .....	<b>152</b>